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Founded in 1932

U.S. Representative of the F.A.I. for soaring

Division of the National Aeronautic Association

Docket Management System
U. S. Department of Transportation
Room Plaza 401
400 Seventh Street, SW
Washington, DC 20490-0001

Re: Docket: FAA-2001-11133, Notice No. 02-02

Certification of Aircraft and Airmen for the Operation of Light Sport Aircraft

Ladies and Gentlemen:

The Soaring Society of America (SSA) is pleased to comment on the above referenced Notice or Proposed Rulemaking. The SSA is a membership association that has, for 70 years (since 1932), been the voice of pilots, manufacturers, operators and other individuals who operate and use gliders and motorgliders (sailplanes and powered sailplanes). The SSA comments from time to time on issues which specifically affect the ability and freedom of members and others of the American gliding community to participate in the sport of soaring. The SSA is the American representative, through the National Aeronautic Association (NAA), of the Federation Aeronautique International (FAI), the worldwide representative of sporting aviation.

Thus, SSA believes it is particularly interested in the development of the Sport Pilot NPRM and the potential it may offer for certification of new types of gliders under a category of Light Sport Aircraft, and the further certification of safely trained individuals to operate those aircraft. The SSA appreciates the effort FAA has expended on this NPRM, and it acknowledges the safety and control that should come from federal oversight of the aircraft, pilot, and continuing airworthiness aspects of pilots flying gliders within the newly defined Light Sport Aircraft.

The SSA, its commercial schools, and its chapter clubs feel particularly well suited to accept the pilot licensing portions of Light Sport Gliders since the proposed licensing regulations are very close to current glider regulations. This will allow new pilot candidates to be trained within the current school and club environment using methods and knowledge developed by SSA and the glider community over decades of relatively safe sport flying. New Light Sport Pilot candidates and new Light Gliders may be operated in conjunction with other classes of Light Sport Aircraft, and SSA can still offer its training techniques, instructors, examiners, tow pilots and others to enhance the

SSA Divisions:

The 1-26 Association
Vintage Sailplane Association
The Sailplane Homebuilders Association
Women Soaring Pilots Association
The Auxiliary-powered Sailplane Association
Freedom's Wings International
World Class Soaring Association

SSA Affiliates:

The National Soaring Museum
The National Soaring Foundation
The Collegiate Soaring Association

safety and efficiency of this kind of training. Historically, from the 1930's through 1960's most gliders would have fit into the NPRM's definition of Light Sport Gliders.

SSA believes that the federal oversight of Light Sport Glider designs and operations will help these aircraft and pilots remain acceptable on public airports and among the general public.

Throughout its comments, SSA refers to Gliders (and motorgliders, sailplanes and powered sailplanes) as defined in FAR 1 and in JAR-22.1

SSA believes that currently certificated gliders, whether certificated under the FAA Basic Glider Criteria or the more recent Joint Airworthiness Authority JAR-22 regulation should remain in their categories. SSA envisions that certification under JAR-22 (or alternative methods authorized under FAR 21) have no need for change. New, lighter, simpler aircraft designed specifically for the rule as proposed in the NPRM will have different parameters (by definition) and more modern characteristics, and thus will be differentiated from older and currently certificated gliders and motorgliders. SSA believes that heavier, faster sailplanes and motorgliders of the future will continue to need the requirements of JAR-22.

Following are the Soaring Society of America's comments to specific areas of the proposal:

Definitions:

Operating Speeds: SSA agrees with the proposal that the 115 Kt maximum operating speed, applied to gliders means a V_{NE} of 115 Kts in all cases including training gliders and motorgliders. V_H does not apply to gliders or motorgliders. SSA believes that Article 89, Section 35 of SFAR 89 should be consistent to indicate that the 115 kt V_{NE} applies to all glider operations. Most of these aircraft operate well below 87 kts during normal soaring operations (usually in the 40 –60 kt range), but the term V_H has little applicability.

Retractable Landing Gear: Gliders have used simple single-wheel retractable landing gears for years successfully under training rules which are very close to those provided for in the Sport Pilot NPRM. These are manually controlled, single lever devices that present little safety hazard if improperly used. Because drag reduction is so important for glider flying, SSA believes that the final rule should read: "Gliders may utilize fixed landing gear or simple, single-wheel retractable landing gear." The seaplane need for repositionable landing gear on seaplanes is similar to the need for simple retracting mechanisms on gliders.

Propellers: Because motorgliders (synonymous with powered sailplanes or self-launching sailplanes) intend to shut off the power plant after launch, SSA believes that the final rule should state: "Gliders (motorgliders) which launch themselves may be equipped with a simple feathering propeller for drag reduction". Motorgliders, by their nature, do not depend "principally on a motor to sustain flight" (FAR 1), but when they launch themselves, a feathering propeller is s significant safety factor.

Towing: Because powered Light Sport Aircraft (airplanes) may have the capability to tow light sport gliders and Part 103 vehicles, there could be many cases where it is preferable for Light

Sport Aircraft to be used as glider towplanes. SSA concurs with other associations that Light Sport Aircraft design consensus standards should allow for Light Sport aircraft to be used as glider towplanes. SSA believes the need for these aircraft will be great among the new Light Sport Gliders and Part 103 vehicles, but such towplanes could also be useful for older current (and vintage) gliders that have difficulty accepting the speeds necessary for towing by current FAR-23 towplanes.

Pilot Certification Comments:

SSA appreciates the standards that FAA is proposing for Light Sport Pilots, and believes that these standards are sufficiently close to the current Part 61 standards that they will lend themselves to already developed methods of teaching. Furthermore, current texts and training syllabi will apply (at least initially) and help start the movement toward lighter new designs to a safe and easy start. The SSA is willing to work with FAA in further development of pilot certification standards to ensure the maximum safety potential is achieved while not over-burdening the new recreational student.

Medical Certificates: The SSA notes that the medical standards for Sport Pilots – Glider will be the same as Part 61, which is that no certificate or drivers license is required (although FAA regulation does apply). In most cases student pilots can solo before they can obtain a driver's license. At the same time it has been stated in previous FAA rulemaking that the accident record due to health issues for gliders and motorgliders does not warrant a medical certificate. SSA endorses the NPRM as written.

Altitude Limitations: As SSA has stated in many writings, altitude equals safety for glider operations. To limit a Light Sport Glider Pilot to an altitude of not more than 2000 feet AGL would severely limit training programs and would (particularly in western states) limit light sport pilots and light sport gliders to proximity to terrain that would create a dramatic decrease in safety. Typical training tows in current gliders are in the 3,000 ft AGL range, so such a limit would make certain training maneuvers difficult to perform, and would restrict gliders to such close range to the home airport as to present a traffic hazard. It would be very difficult to tow a glider to a safe area during windy conditions. As has been proven for decades, the safest place for a glider is often at a safe distance from cloudbase, but otherwise with as much altitude as possible. In western locations in the US oxygen maybe necessary at the appropriate altitudes, but this is a technique that has been taught, as necessary, throughout the glider community for 60 years.

SSA suggests that altitude restrictions for Light Sport Aircraft be written in the form that some parts of the FAR's are written now; that is, to apply the limitations only to those categories intended to be limited. Those to which the limitation would not apply would not be included in the limited list. An example of such a regulation is 91.207 (a).

Cross-Country Requirements for Licensing: SSA suggests using the current glider experience and ground training requirements of Part 61.

Instructor Requirements : Article 89, Section 151, SFAR 89. The requirement for at least 5 hours of pilot-in-command time in a specific make and model light sport aircraft before an instructor could provide instruction in that aircraft is too high for light sport gliders that are often limited by performance to shorter flights. SSA suggests 2 hours for this privilege in gliders.

Instructor endorsements to eliminate limitations: SSA endorses this concept which has shown significant acceptance and simplicity in other parts of the FAR's.

Proposed Aircraft Certification Framework:

The Soaring Society of America appreciates the effort the Federal Aviation Administration has put into the certification of gliders and motorgliders in the past. Although the SSA sees no problems with design, certification, production and continuing airworthiness of gliders remaining under the current FAA framework, SSA understands the potential advantages in simpler consensus standards. SSA is willing to pursue the consensus standards as proposed by FAA using the framework provided by ASTM. In fact, SSA has shown its willingness to cooperate in this endeavor by being a part of the initial setup of a Light Sport – Glider ASTM Sub-committee of which SSA is a member and chair.

SSA believes that the glider movement has been a leader in design standards since the 1939 German Airworthiness Regulations and the FAA's 1950's Basic Glider Criteria Handbook. SSA believes that the current glider certification regulation (JAR-22, with modifications to fit the speed and weight limitations of Light Sport Gliders) is an excellent basis from which to build. The following comments are offered by SSA's Task Force on Sport Pilot Glider design and certification:

JAR-22 is a good basis for a consensus standard for light-sport gliders and motorgliders and provides a good document for promoting international harmonization. JAR-22 is currently used by most European and English speaking countries as an acceptable means of showing compliance. JAR-22 has limitations for very light wing loading gliders and does not currently support all of the requirements delineated in the Light-Sport NPRM.

JAR-22 includes:
- Design and performance standards.
- Maintenance manual requirements.
- Pilot's operating manual requirements.
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JAR-22 does not include:
- Flight proficiency standards to operate a particular make and model of glider.
- Quality assurance system requirements.
- Operation safety monitoring system requirements.
- Approved materials or methods for approving materials.
- Approved process specifications or methods for approving process specifications.
- Final product acceptance tests.
- Periodic review of the consensus standard.

- Approved components such as instruments, tires, engines or propellers or methods for approving components.
- Procedures to ensure a person acceptable to the FAA can be identified to assume continued airworthiness responsibilities.

The German Microlight glider class is currently being studied by the LBA for very light gliders with empty masses less than 120 kg (265 lbs.) and a stall speed at maximum flying mass less than 50 kph (31 mph). It may be possible to use the certification requirements for this class for very light gliders to help develop the consensus standard for gliders.

ASTM Involvement:

SSA has long history of working with the FAA and the JAA through the JAR-22 study group. However, it may make sense to use ASTM for helping developing the different standards required for each class of light-sport aircraft. The glider and motorglider specific design and performance standards are covered very well by JAR-22, but the other requirements desired by the FAA such as quality assurance standards, final product acceptance tests and so forth will be very similar for the various classes and a benefit for all classes may be found by collaborating.

Conclusions:

The SSA offers the above comments to the Sport Pilot NPRM as a method to promote certificated new, light, simple sailplanes which will also appeal to a properly trained new group of pilots. SSA offers the above comments as minor modifications to the general concepts presented in the NPR. Some of SSA's comments are truly matters of safety and SSA requests these be incorporated into the final rule. SSA is also willing to work with FAA as details and needs become more evident during the drafting process.

Specifically regarding glider certification, the Light-Sport Aircraft NPRM offers some real advantages. The Soaring Society of America and its affiliate the Sailplane Homebuilders Association, are willing to take a leadership role by becoming involved in the ASTM sub-committee assigned for the certification of gliders and motorgliders.

SSA may develop more comments in the future, and we have encouraged our members to make comments as well. Please call on us as appropriate as the Sport Pilot proposal continues to fruition.

Sincerely,
The Soaring Society of America, Inc.

James B. Short, Chair
Government Liaison Committee